Principles
Book by Ray Dalio

This summary by Allen Cheng

Ray Dalio is founder of Bridgewater Associates, the largest hedge fund in the world. In his book Principles: Work and Life, Dalio shares the guiding principles powering his success and Bridgewater’s.

Principles is a master class in rational thinking. The main theme is that finding truth is the best way to make decisions, and that ego, emotion, and blind spots prevent you from discovering the truth. Dalio shares his major strategies to circumvent these weaknesses, including radical open-mindedness, thoughtful disagreement, radical transparency, and believability-weighted decision making.

In this Principles summary, you’ll learn:

- How the rational you and the emotional you fight to control your life
- How to get past your ego in pursuit of your goals
- The 5-step process for getting what you want out of life
- Why you need other people to improve your probability of being right
How to Get the Most Out of *Principles* and This Summary

Unlike most nonfiction books, *Principles* is quite lean and high level. Aside from the first biographical section, Dalio eschews fluffy anecdotes and hits you with succinct rules and tactics for life and work.

This means that without really internalizing the lessons, Dalio’s principles will sound merely like platitudes and pass through your brain without changing anything. How many times have you read a nonfiction book, only to ignore its teachings and leave your weaknesses intact?

I’ve written this summary to synthesize *Principles*’s main points and themes so you can concentrate on understanding and grappling with them and not get lost in the weeds. Dalio repeats these themes in different contexts and formulations through the book, and it can be hard to see the patterns and focus on stamp-collecting principles.

Throughout this summary of *Principles: Work and Life*, I’ve also added sections called “Stop and Do This Exercise,” I recommend actually stopping and completing the exercises. I went through them myself and took 10 private pages of notes on my weaknesses and how I’m going to improve them.

Even more, I recommend reading the actual book, where Dalio clarifies his reasoning behind the principles. This summary should serve merely as a primer and reinforcement of the main concepts - it may not be sufficient for you to fully internalize his teachings.

Remember that it’s better to spend 20 hours engaging with a book that might change your life trajectory, than to finish a book in 5 hours and change nothing.
One-Page Principles Summary

- Finding the truth is the most important thing possible to make the best possible decisions you can. Making the best decisions gets you closer to your goals.

- Two things get in the way of finding truth: 1) your ego and emotions, 2) your blind spots.

- To get over these two barriers, you need internally to be **radically open-minded**, and externally to **seek help from believable people**.
  - Recognize that the chance that you independently always have the best answer is extremely low.
  - Always be fearful that you’re wrong and you’re missing information.
  - Would you **willingly** blind yourself into doing something wrong? Most people do this.
  - Raising the probability that you are right is almost always worthwhile.
  - Don’t say “I’m right,” ask, “How do I know I’m right?”

- An important truth people commonly ignore is their own weaknesses and mistakes. Thinking about this causes them pain.
  - By ignoring your weaknesses and mistakes, you are handicapping yourself in achieving your goals.
  - Mistakes and pain are nature’s reminder to learn. You must reflect on your mistakes and design solutions to your problems to evolve.

- 5-Step Process for Getting What You Want
  - Set clear goals
  - Identify problems and don’t tolerate them
  - Diagnose your problems to find root causes
  - Design solutions to get around problems
  - Do the tasks required to completion

- The 5-Step Process is common sense. But most people don’t actually do it for a variety of reasons.
  - People are weak at one or more of these steps. Identify what your weakest steps are. Then get better at them, or find someone who can help you compensate for them.

- People are wired very differently. They think in different ways and have different blind spots.
  - This promotes conflict and misunderstandings with poor communication.
  - Practice thoughtful disagreement to see their viewpoint, and arrive at the truth together rationally.
• View yourself from the top down as a machine.
  o You are both a worker and a designer of the machine. You need to alter your machine to produce better outcomes.

• In the workplace, the idea meritocracy is the best way to make decisions.
  o Bring together smart, independent thinkers, have them thoughtfully disagree, and abide by agreed-upon ways of getting past disagreement. This will yield the best collective thinking.
  o Necessary for idea meritocracies to work are:
    ▪ Radical truth - no filter on what you’re thinking
    ▪ Radical transparency
    ▪ Thoughtful disagreement
    ▪ Believability-weighted decision making

• Just as in life, view the organization as a machine, and yourself as an engineer.
  o Any problem may signal a problem in the machine design. Don’t ignore this.
  o Understand the parts in the machine (the people, the processes, the culture) like a foreman understands his tools.
  o The ideal is to create a machine that works so well you can sit back and watch beauty happen.

• Codifying your decision making rules into Principles will speed up and improve the quality of decision making.
  o See situations as “just another one of these.”
  o Use tools to help remember your principles in your moments of greatest weakness.
Life Principles

5-Step Process for Getting What You Want

1. Set clear goals
2. Identify problems and don’t tolerate them
3. Diagnose your problems to find root causes
4. Design solutions to get around problems
5. Do the tasks required to completion

Breaking it down further:

1. Set clear goals
   - Be audacious. What you think is unattainable is merely a function of what you know right now.
     - Once you start, paths will emerge that were inconceivable before.
     - If you know you can achieve your goal, you’re not aiming high enough.
   - Ideally, your desires (primal wants) align with your goals (rational wants).
     - Diets are hard because your desire (eat tasty food) conflicts with your goal (lose weight).
     - When the two align, it becomes easier to fulfill your goals.
   - Choosing what NOT to do is often as important as choosing what to do.
     - You can have just about anything you want, but not everything you want. Reject good
       alternatives to pursue even better ones.
   - Don’t confuse goals with tasks.
   - If money comes up naturally, be wary of setting this as a primary goal.
     - Meaningful work and relationships make you happy more than money does.
     - Start with your real non-money goals, then work your way backwards into the money
       you need.
     - Dalio argues having the basics - a good bed, good relationships, good food, good sex - is
       most important and don’t get much better when you have more money.

2. Identify problems and don’t tolerate them
   - Identify the biggest problems first.
1. Don't tolerate your problems. If you don’t have the will to succeed, then your situation is hopeless.

2. If your air conditioner is broken, would you tolerate that? If not, why should you treat yourself differently?

3. Diagnose problems to get at their root causes

   o Speak with relevant people and look at evidence together.
   
   o Get other people comfortable with pointing our your mistakes. Make clear they’re not going to hurt you.
   
   o Take time - more than 15 minutes, sometimes hours.
   
   o Questions to ask
      
      ▪ Why didn’t things go as they should have?
      ▪ Ask Why five times to get at root causes.
      ▪ Is the root cause a pattern?
      ▪ How should I as a machine evolve as a result?
   
   o The Work Principles treatment of this has more tactics.

4. Design solutions to get around problems

   o Replay the story of what you have done to get you where are you are now.
   
   o Look down on yourself as a machine and find changes to produce better outcomes.
Would you tolerate a microwave that shuts off every 5 seconds to check its email?

- Drill down from high level to specific tasks and timelines.
  - Think of your plan as a movie script to visualize who does what through time.
- Write down your plan for everyone to see and measure against.

5. Do the tasks required to completion

- Prioritize your to-do lists, and tick them off in order.
- Establish clear metrics to make clear you’re following your plan.

Tactical Points

- These steps must be completed in order - otherwise you’ll worry about barriers and avoid confronting the true problems.
  - Don’t think about how you’ll achieve a goal while you set it.
  - Don’t worry about how to solve a problem when you diagnose it.
- Weaknesses don’t matter if you find solutions.
- No one is great at all 5 parts. Find which major step you typically fail.
  - Then, get rid of that weakness.
    - Get better at it yourself
    - Find other people to cover your weakness.
- Choose which habits to acquire, and which to get rid of.
  - If you can rid yourself of your top three harmful habits, you will radically improve the trajectory of your life.
- Visualize the success
  - You can crave the thrill of success even while struggling to achieve it, and also feel the tragic results of not pushing through.
  - “What hurts more - the pain of hard work, or the pain of regret?”
  - Craving as core in defining habits is covered in *The Power of Habit*

Stop and Do This Exercise

1. Go through the 5-Step Process.
2. Which of the 5 Steps are you weakest at?
   - What are examples of mistakes you’ve made where this weakness showed itself?
   - List ways to get around this weakness.
   - Who do you know who’s strong at this Step who can help you execute?

Embrace Reality and Relentlessly Find the Truth

This is probably the strongest theme of the book, and the biggest barrier people have to making better life decisions.

Most of Dalio’s principles can be seen as springing from this root. Much of the book is about understanding the importance of finding the truth, and how to achieve it over common obstacles.

Introduction

- Don’t fall in the trap of wishing that reality were different. This gets you nowhere.
- Instead, embrace your reality and deal with it. You must be radically open-minded to the possibility that you are wrong.
- Don’t get hung up on how things ‘should’ be. This will bias your objectivity.
  - For example, if you think something is morally wrong, assume that you’re wrong and figure out why what nature is doing makes sense.
    - Nature optimizes for the whole, but people narrowly judge good and bad based on how it affects the individual.
    - Eg hyenas killing a young wildebeest - it feels wrong, but on reflection it’s clear this is good for evolution of the wildebeest and for the total system.
- To deal with the emotional pain of finding truth, see life as a game, where the object is to get around a challenge and reach a goal.
  - [Setbacks are inevitable, just like you can’t beat Dark Souls in one try.]
- Don’t say “I’m right,” ask, “How do I know I’m right?”
- You can’t be sure of anything - there are always risks that can hurt you badly, even in the safest-looking bets. Always assume you’re missing something
The Two Barriers to Recognizing Reality

- **Ego barrier:** wanting to be capable and to be seen as such
  - We have underlying biological needs to be loved, to be important, to be praised; and fears of losing love, being irrelevant, being criticized
  - Don’t avoid pain - reflect on it and savor it.
  - A common problem, especially among high achievers, is wanting to have the correct answers. School and parents tend to reinforce this.
    - If you value acting correctly most of all, you shouldn’t care if the right answer comes from you.
  - **Focus on finding the truth, not on being right.**

- **Blind spot barrier:** seeing the world through our own biased lenses
  - Example: some people see big pictures and miss small details; some are linear thinkers and others are lateral.
  - You can’t appreciate what you can’t see, any more than a color-blind person can grok what color is.
  - Thus two people who see the world very differently often end up arguing over who’s right without understanding their own blind spots.
  - The solution to both is radical open-mindedness (discussed below).

There are Two “You’s”

- 1) The rational high-level, logical, conscious neocortex, 2) the lower-level emotional, often subconscious amygdala.
- The lower-level you exists as a result of evolution and automatic responses to inputs.
  - An animal doesn’t decide to fly or hunt - it simply follows instructions from that part of the brain.
  - The amygdala drives our motivations and actions through emotions.
  - This is where the ego barrier resides.
- The higher-level you is a more recent evolution unique to humans.
  - The rational you must overcome the lower-level ego barrier.
- The two you’s fight to control you. They conflict what you desire and what is actually good for you.
• The conscious rational you can know that understanding your weaknesses and facing failure is the best, but the subconscious emotional you makes you shy away from it to protect your ego.

• If you angry at yourself for eating a tub of ice cream, this is the rational you fighting with the emotional subconscious you.

• Since the two occupy different parts of your brain and don’t cross-talk often, it can be really hard to consciously explain your subconsciously driven emotions and actions.

• Often, the subconscious you hijacks your brain and actions, and the conscious mind needs to refuse to obey its instructions.

  • Recognize the warning signs of this - heart rate, breathing are sympathetic reactions that should trigger evasive maneuvers to get out of this state.
    ▪ If you react spontaneously, you are probably overreacting.
  
  • [Different people may have different abilities to regulate their subconscious, or different relative strengths of the conscious vs subconscious - eg willpower differences.]

  • Consciously reflect on what causes the amygdala hijackings. Train the subconscious you the same way you would teach a child to behave - with loving kindness and persistence.

• Yet the best ideas and decisions may come from the cooperation of the two, not a complete subjugation of the subconscious.

  • Sometimes the greatest inspiration “pops up” from our subconscious.
    ▪ These happen most often when relaxed and not consciously forcing it.
    ▪ Dalio likes transcendental meditation to connect the conscious to the subconscious.

  • The conscious logical mind then examines the ideas.

• Funnily, when you talk to someone else, you’re dealing with their “Two Yous”. So you can be having one of 4 conversations without realizing which one you’re having.

  • No wonder flareups and misunderstandings are so common.

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**Embrace Your Mistakes**

Recognizing your mistakes and feeling the pain is critical to finding the truth. Here are concepts that help you rationalize past the ego barrier.

• Mistakes happen all the time, and it’s more important to recognize and learn from them than to cover them up, which can exacerbate problems.
Parents and schools overemphasize the value of having right answers all the time. The best students in school tend to be worst at learning from mistakes.

- Pain is OK. It’s nature’s reminder that there’s something to learn
  - Pain + reflection = progress
  - Develop a reflex for reflecting on pain, rather than avoiding it. When you make a mistake, relish the chance to get better, rather than being ashamed about it.
  - To gain strength one has to push one’s limits, which is painful. If you’re not feeling pain, you’re probably not being aggressive enough with your goals.
  - People who embrace huge setbacks end up as happy or happier than where they were before.

- Don’t blame bad outcomes on anyone but yourself.
  - Imagine criticizing your ski instructor for not shifting your weight properly.

- Each mistake is a puzzle that, when you solve, reveals a gem.
  - Collect these prizes continuously to improve your decision making, so that you can ascend to higher levels of play where the challenges get greater.
  - Think about this like a game, where you progressively collect equipment and tools and get stronger.
    - Refusing to improve is keeping yourself in stasis.
  - “If you look back on yourself a year ago and aren’t shocked by how stupid you were, you haven’t learned much.”

- Adaptation through trial and error is possibly more powerful than conscious thought.
  - Eg brainless viruses outpace mankind, with all its conscious thinking

_Evolving is Life’s Greatest Reward_

- We have evolved to crave self-improvement. This feeling is probably much better for the species’ survival.

- You think you’re striving toward material rewards (money, houses) that will make you happy, but you actually get much more long-term satisfaction at getting better.
  - The things are just the bait. Chasing after them forces us to struggle and evolve.
  - People crave mastery. Hence why hobbies are popular.

- Over time you will ascend to higher and higher levels, so that what once seemed impossibly complex becomes simple.
• For people you care about, deny them what they want to give them the opportunity to struggle, which will lead to strength.

Examples

• Joseph Campbell’s The Hero’s Journey
  o Heroes start as ordinary people who are drawn by a call to adventure. This leads them down a road of trials with battles, successes, and failures.
  o They gain special powers over time, become increasingly successful, and lead to larger battles.
  o They experience one very big failure (“abyss”) that tests their resilience; if they make it through, they undergo a metamorphosis.
  o They ultimately get the largest reward (the ultimate boon) which is special knowledge about how to succeed, earned throughout the journey.

• Dalio’s biggest failure
  o 1982 during the Latin American debt crisis. He believed Mexico’s default was just the beginning of a depression, but instead loan restructurings and Fed efforts to make more money available caused a resurgence.
  o Dalio bet on this, lost nearly everything, including his employees, and he felt like he was back in 1975, starting Bridgewater from the beginning.
  o His interview quote that makes him cringe today: “There’ll be no soft landing. I can say that with absolute certainty, because I know how markets work.”

• At Bridgewater, employees are responsible for adding to an “error log.” If you log your own mistake, you’re OK; if someone else logged it for you, you’re in big trouble.

Stop and Do This Exercise

• Start by writing down the most salient mistakes you’ve made in the past 12 months.
• Connect the dots between them. What patterns do you see?
• Then write down your one “big challenge,” the weakness that most blocks you from getting what you want.
• Use the 5-Step Process above to plan your solution, and what specifically you need to do to get over this weakness.
Radical Open-Mindedness

To recognize the truth, you must accept that you are wrong and relentlessly find ways to increase the chances you are right. Dalio calls this **radical open-mindedness**.

- **Understand that you are blind, and that you need to figure out a way to see.**
  - Pain from mistakes is how you learn that you are blind.
  - Review bad decisions that you made because you failed to see what others saw. Ask others to help with this.
  - **Accept that if you are willingly blind to yourself doing something wrong, you will never maximize your potential.**
  - No matter what your baseline probability of being right is, it is always valuable to raise your probability of being right.

- **Accept the possibility that others might see something better than you and point out threats and opportunities you don’t see.**
  - People who make the best decisions are rarely confident that they alone have the best answers.
    - See [Charlie Munger and Warren Buffett](#) for similar ideas
  - You’re looking for the best answer that exists, not simply the best answer that you can come up with yourself. **The probability of your always having the best answer is very small.**
  - Believability weigh the people you seek opinions from. Don’t just listen to any random opinion.
  - If multiple believable people say you’re doing something wrong but you don’t think you are, you’re probably biased.

- This doesn’t mean losing assertiveness. In fact, being right more often should make you more confident, even if it doesn’t come entirely from yourself.

- Seeing more can only allow you to make better decisions, which will bring you closer to your goal.

- Do NOT settle on an opinion before getting information, then merely gather information to confirm that opinion.
  - **“I want to make up my own mind” is a fallacious mindset** - opposing views shouldn’t threaten your ability to make up your mind. It can only make you more accurate.

- **Hallmarks of close-minded people**
  - Get angry when someone disagrees.
  - Want to be proven right more than learning other perspectives.
- Make statements more than ask questions.
  - Especially low-confidence statements like “I could be wrong, but...”. This signals a superficial belief of open-mindedness but really entrenchment around their opinion.

- Are unable to hold multiple points of view simultaneously in their minds - can only process their own viewpoint at once.

- Find it embarrassing not to know - will tend to be more concerned with appearances.

- **Tactics**
  - When accepting viewpoints from others, suspend judgment and empathize.
    - Do not punish others for speaking their mind.
    - Make clear you want to understand their perspective and aren’t trying to prove them wrong (they have their own egos to contend with).
  - Recognize feelings of tension and sympathetic responses. These are signals of closed-mindedness. Use this to trigger responses of calming down and slowing down.
    - Practice this and it will become a habit.
  - Review your past mistakes and decisions based on incomplete information or blind spots.
  - Before deciding, ask yourself: “Can you point to clear facts leading to your view?”
  - Use written-down, even computer-programmed heuristics to help you make decisions.

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**Mental Maps x Humility**

- Chart yourself on two dimensions - humility/open-mindedness, and mental maps (aka what you know and how you reason).

- Many people remain trapped in low values for both. They know little and are convinced they know everything. [Dunning-Kruger may be at play].

- If you have good mental maps but low humility, you leave a lot of value on the table in missing out what you don’t know.

- If you have high open-mindedness but poor mental maps, you will have problems picking the right people and ideas to follow.
Rely on Others

- Humans evolved to support cooperation, allowing groups to accomplish more than individuals.
  - This led to development of altruism, morality, honor.
- You will never be able to view yourself objectively most of the time. Get others to be radically truthful with you so you can see the truth about yourself.
  - As CEO, Dalio gathered a management committee to oversee himself.
- You will never be able to be proficient at all the things necessary to reach your goals.
  - **Would you want Einstein on your basketball team?**
  - Don’t be upset if you find you’re bad at something - be happy you found out, since this will improve your chances of meeting your goal.
  - You can try to work at your weaknesses, but check if it’s inconsistent with your nature. If so, it’s probably better to ask others to fill the gap.
- Find the most believable people in the area of concern.
  - Seek out the smartest people who disagree with you so you can understand their reasoning.
  - Find other people who disagree with them, and listen to their thoughtful disagreements.

People are Wired Very Differently

- Through a combination of genetics and environment, people come to think in very different ways.
- People who think very differently have trouble understanding each other and often ignore the value of what they don’t have.
  - Eg abstract thinkers think literal people have no imagination, and literal people think abstract people are pedantic philosophers.
  - Extroverted people love talking out ideas; introverts prefer thinking privately and sharing after they’ve grappled with a problem.
  - Planners stick with a plan (aka are rigid and slow to adapt), while perceivers change direction often based on new information (aka are capricious).
- Even worse, people often don’t know which type of person they are.
- Be curious enough to want to understand how the people who see things differently came to see them that way.
  - Instead of getting frustrated with people and the choices they make, realize they aren’t intentionally acting in a counterproductive way - they’re simply making the best decisions they can based on how their brains worked.
• Understand your and others’ strengths and weaknesses to get the best results out of everyone.
  o Managers who don’t understand people’s thinking styles won’t understand how their reports will behave in different situations. This is like a construction foreman not understanding how his equipment will behave.
  o Instead, see yourself as the conductor of an orchestra, bringing in people at the right balance to execute your vision.
  o People with complementary strengths do better work together than separately (eg a visionary and an executor).

• Dalio’s favorite personality assessments
  o Myers-Briggs Type Indicator
  o Workplace Personality Inventory
    ▪ Persistence, independence, stress tolerance, analytical thinking, achievement orientation, concern for others
  o Team Dimensions Profile
    ▪ Creators vs refiners vs advancers vs executors vs flexors
  o Stratified Systems Theory
  o Big Five
  o These combine together to form archetypes
    ▪ Eg the spacey, the impractical Artist, the tidy Perfectionist, the Shaper, the Wise Judge, etc.

• Tactics
  o Baseball cards
    ▪ Assign people attributes like “conceptual,” “creative,” “determined”; and actions like “holds others accountable” and “pushes through to results”
    ▪ People rated highest by peers in each decision hold more weight on that dimension when rating others.
    ▪ An MBTI of S (sensing, details) and J (planful) along with “executor” builds a clear narrative.
  o How to compensate for your strengths and weaknesses.
    ▪ Train through mental exercises to soften your weaknesses.
    ▪ Mechanical coping techniques
• Eg alarms for disorganized people
  ▪ Rely on other people better than you at something.

• [I wish Dalio had gone further into the ideal composition of a team, based on the project needs; and into how different types of people should better communicate with each other, eg high vs low concern for others]

Stop and Do This Exercise

• Think of someone whom you disagree with often.
  o What are they blind to that you see often? Does thinking of them as literally blind to that thing help you understand their thinking?

• What do you tend to be blind to?
  o Who can complement what you’re blind to?

Characteristics of shapers

When transitioning out of his CEO role, Dalio asked his lieutenants what his unique skill was. They answered it was “shaping,” or coming up with unique and valuable visions and building them out, despite the doubts of others.

Here is a brief interlude into the archetype he believes fits him best. He also believes others like Steve Jobs, Jeff Bezos, and Elon Musk fit this archetype.

The common qualities they have:

• Baseball card: Visionary + Practical Thinker + Determined
• Independent thinkers verging on rebelliousness.
• Don’t let anything stand in the way of achieving their goals.
• Are resilient and gritty, since their need to achieve is stronger than the pain they experience
• Have strong mental maps of how things should be done
• Test their mental maps and change them to make them work better
• Have a wider range of vision than most, seeing both big picture and granular details
• Are assertive and open-minded at the same time. Are creative, systematic, and practical at the same time.
• Intolerant of people who work for them who aren’t excellent
• Nothing ever feels good enough, and this gap is both a tragedy and a constant source of motivation
• Generally have low ranking on “concern for others” - largely because when faced between achieving their goal and pleasing others, they choose their goal every time

• Sustain success over decades with continuous successes, rather than exiting their company once for a lot of money (these might be called “inventors”)

Thoughtful Disagreement

Being open-minded will make you seek other smart people and explore their viewpoints. This may create conflict between the four You’s in the conversation. Here are Principles to have thoughtful disagreement.

• Your goal is to find out which view is true and decide what to do about it.
  - It is NOT to convince the other party that you’re right.

• The primary motivation is the fear of missing important perspectives.
  - What stings more - being wrong, or failing your goal?

• Often people have a natural reluctance to disagree - to maintain social cohesion or to avoid emotional explosions.
  - The trick is to have thoughtful disagreements without triggering emotional explosions.

• Be open-minded and assertive at the same time.
  - You must see things through the other’s eyes while communicating clearly how you see things. The best ideas will arise from this.

• Tactics
  - Use questions rather than make statements.
  - Discuss calmly and dispassionately, and remind the other of deviations from this
    - Ask questions like “would you like me to be open with my thoughts, or keep them to myself?”
    - “Are we trying to reach the best option, or are we trying to fight for our own point of view?”
  - Describe back to the other person their own perspective to make clear you understand it.
  - Two minute rule - you can call a short period to get your main thoughts out without interruption
  - Find the most believable people in the area, and listen to their thoughtful disagreements. Triangulate with smart people.
- If you can’t agree, find a person you both respect to moderate.
- Don’t see suggestions automatically as critiques.
- Focus more on the substance of what is being said, rather than the style of it

Also see: how to get and stay in sync below
How to Make Decisions Effectively

After you collect information, how do you make the best decision for yourself? While each decision has unique particularities, here are general principles.

Learn well
- Be radically open-minded
- Synthesize the situation
  - Gain perspective on size - some issues or facts are more important than others
  - Don’t mistake opinions for facts
  - Synthesize over time
    - Observe the rate of change as well as the baseline level
    - Many see something getting better, but ignore that it’s not getting better quickly enough.

Simplify
- Focus on the “by and large” general level of understanding
  - Don’t focus on edge cases or whether it’s “totally true”
- Use the 80/20 rule to see what 20% of factors yield 80% of the outcome
- Navigate levels of abstraction
  - Use the metaphor of “above the line” as the main points, and “below the line” as detailed subpoints
  - Go below-the-line only when necessary to illustrate a main point. Don’t get lost in the weeds

Decide well
- Figure out the criteria underlying your decision making and systematize them (more below).
- Never seize the first available option (more below).
- Make expected value calculations.
  - Everything has a probability and reward for being right, and a probability and penalty for being wrong.
- The probability is more important than the possibility (which is binary).
  - It’s OK to take a chance when the chances of success are low but the upside is very high, if the downside is low.
  - It’s not OK to rule out an option simply because there’s something wrong with it.
- Choosing what NOT to do is as important as choosing what to do.
  - **Cue Warren Buffett**: if you only had 8 investments to make in your lifetime, those investments will be far better.
- Decide without emotion
  - Convert principles into algorithms and have the computer decide alongside you.
- Figure out when it’s better to decide than it is to gather more information.
- Use principles to fast-track your decisions.

**Systematize your decision making with principles**
- Principles are fundamental truths that allow you to make better decisions quickly.
- Think through your principles for making decisions, write them out in both words and algorithms, backtest them, and use them on a real-time basis in parallel with your brain.
- When you recognize a situation as “another one of those,” you can just refer to your rules as a shortcut to good decision making.
- Good principles are timeless.
  - Have respect for history - what you see may not have happened before in your lifetime.
  - Example: 2008, Bridgewater’s “depression gauge” was indicating a bursting point to the debt bubble, since the costs of debt servicing were outpacing projected cash flows, and interest rates were so close to 0 that they couldn’t reverse the downturn. Dalio studied history and went day by day through the Great Depression and the Weimar Republic to compare what was happening.
- Between people, the principles/criteria/rules become the substrate for disagreements. Rather than argue about the conclusions, argue about the principles. If you agree on the principles, then you should also agree on the decision.
- Examples
  - Dalio began by writing down his decision making criteria for trading, so that when he closed the trade, he could reflect on how well the criteria worked. He would backtest the criteria over a century of data in every country available.
Bridgewater started using computers in the late 70s to automate trading criteria and produce trading decisions in response to the environment. Indicators would catch shifting fundamentals and trend-following filters would confirm price movements. Both pointing in the same direction was a strong signal.

He’s started automating management and human relationships through tools like recording all meetings, the “dot collector” and the pain button. Computers can take in data points about people and figure out how to get the most out of people for each project.

*Never seize the first available option*
- If you have a choice between two difficult options, look harder for a novel solution that you haven’t found yet.

*Examples*
- **Pure Alpha**
  - In investing, it seemed Bridgewater could either take high-risk high-return or low-risk low-return paths. The former would risk a total wipeout and the latter is unrewarding.
  - Instead Dalio found that each incremental uncorrelated asset could improve the return-to-risk ratio and reduce the risk of losing money in any given year.
  - This led to Bridgewater’s flagship fund, Pure Alpha, which has returned an annual average of 18% across its nearly 30 years.

- **Bridgewater’s culture**
  - In the 90s, Ray’s lieutenants gave him feedback about how his openness makes them feel incompetent and humiliated and engenders toxicity. It seemed they could have one of two things: 1) be radically truthful and bring weaknesses to the surface, 2) have happy and satisfied employees.
  - He came to understand that people who weren’t as close to Ray didn’t know his principles and misinterpreted his directness.
  - This led Ray to put his management principles in writing, clarifying why radical transparency was critical to success, and providing a framework for resolving disagreements.

*Weigh second- and third-order consequences*
- Don’t let short-term first order consequences deter you from reaching the real goals.
  - Eg fitness. A first order consequence is the pain during exercise or dieting. A second order consequence is health. A third order consequence is happiness, attractiveness, etc.
• Inversely, tempting first-order consequences can deter you from their downsides (eg smoking)

• Nature may even be throwing us trick choices to punish people who make short-term decisions on first-order consequences alone.

Visualizing Complex Systems as Machines

A favorite theme of Ray Dalio’s is to view things top-down as a machine, and to see yourself as a designer of the machine.

This applies to you as a machine in life. It also applies to organizations (see much more in Work Principles below).

• Looking from bottom up only will constrain your ability to find universal laws.

• If you see humans top-down as one of millions of animal species, you’ll see the vast commonalities we have with animals.
  
  o “We have the intelligence of moss growing on a rock compared to nature as a whole. We are incapable of designing and building a mosquito, let alone all the species and most of the other things in the universe.”

• Whole systems can operate with the individual merely understanding its own self-interest rather than the entire game.
  
  o Example: sex is a hell of an incentive in the form of pleasure, but it advances DNA at a system level without people thinking about it.

For life

• Think of yourself as a machine operating within a machine. You are both a worker as well as a designer. You can alter your machines to produce better outcomes.

• Design the team in the machine to best meet the outcome.
  
  o Eg a military goal is to take a hill from an enemy. First you design your machine - 2 scouts, 2 snipers, 8 infantrymen, etc. Then you put the right people in each position to produce the best outcome.

• The ‘designer you’ must figure out if the ‘worker you’ is really appropriate in the position, is trustworthy, or needs to be fired.

• Consider the rules/algorithms you use for decision making. If they lead to the wrong output, the weightings or rules need to be changed.
• Think of your time and effort as being put into investments. If the ROI is poor, then remove that investment.
  o Let’s say you put $1000 into an investment and know that it’ll go to $0 in 2 years. You have the chance to pull out money now. Would you leave it in?
    ▪ Obviously not. So why is your time any different?
• Be intolerable of your weaknesses like you would be intolerable of your computer breaking down.
  o It must be repaired.

For economics

• Dalio visualized the cause-effect commodities had on each other - the quantity of livestock and how much weight they gained predicted demand for corn and soybean

• Look at systems with a granular perspective
  o Instead of seeing supply and demand as bulk quantities sold, measure demand as the amount spent; look at who buyers and sellers, and why they buy and sell.
  o In business accounting, separate profits coming from the core business and speculative profits from price changes. This shows a “risk-neutral” position, beyond which one could speculate if desired.
  o Bridgewater detected a debt crisis in Europe around 2010. Policymakers in Europe didn’t understand granularly who the borrowers and lenders were, and how their abilities to borrow and lend would change with market conditions. They saw investors as a single “market” that could be influenced with large pushes.

• Systems are naturally self-correcting.
  o If there’s too much supply in a market, prices will go down, companies will go bankrupt, and supply reduced to demand.
Work Principles

Work Principles are really just an extension of Life Principles to the organizational scale. The ultimate goal is to find the truth by leveraging the strengths of the group. The trick is to do this thoughtfully while bypassing the inevitable emotional conflicts that arise.

Intro points

- A great organization has great people and a great culture
  - Great people have great character and great capabilities.
    - One without the other is dangerous.
  - People who aren’t aligned on the mission will work for different, conflicting goals
- An idea meritocracy is the best system for making decisions.
  - Bring together smart, independent thinkers, have them thoughtfully disagree, and abide by agreed-upon ways of getting past disagreement. This will yield the best collective thinking.
  - This is achieved by:
    - Radical truth
    - Radical transparency
    - Thoughtful disagreement
    - Believability-weighted decision making
- Look down on the organization as a machine, consisting of culture, people, and processes.
  - The goal is to create a machine that works so well you can sit back and watch beauty happen.
  - Compare its outputs with its goals; if it is falling short, then something is wrong with the people or the design.

Radical Truth and Radical Transparency

- To be great, you cannot comprise the uncompromisable.
  - The uncompromisable is finding out the objective truth and making the best decision.
  - What is compromisable - emotion, ego, anxiety, “little deals” that distract from the “big deal” of knowing and acting on the truth.
- The more truthful information you have access to, the better the decisions you can make.
This is why radical truth and transparency are important

- Learning is compounded when everyone is able to hear what everyone else is thinking.
- Hiding the truth from people is like letting your kids grow while believing in the Tooth Fairy.

Radical Truth is Not Filtering

- Revealing one’s thoughts and questions relentlessly surfaces issues immediately instead of hiding them.
  - This provides the opportunity to have thoughtful disagreement and see things through each other’s eyes.
  - Everyone has not only the privilege but also the obligation to speak up publicly.
  - “It’s simple - just don’t filter.”
  - Example: an employee sent Ray an email: “you deserve a D- for your performance in the meeting...it was obvious that you did not prepare at all.”

- The inverse of this is hiding one’s real thoughts and burying problems and disagreements.
  - This happens in many (most?) workplaces.
  - This aggravates misunderstandings or disagreements, and leads to larger conflicts and separation.

- Radical truth may be short-term painful but long-term helpful.
  - Often the cost to this is open criticism, discomfort. But this is tough love, and a sign of caring is telling people what they need to improve.
    - “When I thought someone did something stupid, I said so and I expected them to tell me when I did something stupid...that was what strong and productive relationships looked like. Operating any other way would be unproductive and unethical.”
  - People need to internalize the “embrace reality” points above on an individual level. Pain + reflection = progress, on the organizational level.
  - If you’re clear about what you’re doing and why, there won’t be misunderstandings. They will understand why you’re being tough on them.
  - Remember, the purpose is to arrive at truth, not prove that someone is right or wrong.

- Aligning what you say and what you feel is much simpler. You can focus on the most important things, and you’ll be happier.
- It must be acceptable to make mistakes. It must be unacceptable to not learn from them.
How to Get and Stay in Sync

- Getting in sync is aligning on all levels and resolving misunderstandings and disagreements. Radical truth is necessary to get in sync.

- **Prioritize getting in sync on the most important issues with the most believable parties.**
  - Make a list of disagreements in priority.
  - Downweigh chirping, which is complaining without taking the full picture into account or reflecting close-mindedness.

- People must practice thoughtful disagreement and be radically open-minded to get in sync.
  - Identify closed-minded people and deal with them accordingly.

- Be open-minded and assertive at the same time.
  - You must see things through the other’s eyes while communicating clearly how you see things. This is essential to the idea meritocracy.
  - Most people find it easier to be assertive (since they have ego attachments, and it’s easier to share how you see things than to empathize). Remind them that the real winners are those who change their minds, since they learned something.
  - Some are too willing to accept others’ conclusions. Hiding one’s viewpoints will hamper the idea meritocracy, since some ideas may be better.

- **Suggestions and questioning are not the same as criticizing.**
  - A person making suggestions may not have concluded a mistake will be made - they’re just double checking.
  - “Watch out for the ice” vs “you’re being careless and not looking for the ice.”

- **Managing Meetings**
  - Make clear the level the meeting is operating on (principle/machine level, case-at-hand, specific-fact)
  - Make clear who is directing the meeting and what the goals are.
  - Repeat the question to be clear what is being asked and answered.
  - Limit the participation to whom you value most for your objectives.
    - 3-5 smart people may be better than 20, due to decreasing marginal benefits of new perspectives, and inefficiency in group coordination.
  - If someone inexperienced offers an opinion, weight the cost of exploring the opinion vs the gain in assessing their thinking.
○ Avoid topic slip by tracking the conversation on a whiteboard so everyone can see where it’s going.
○ For regular meetings, have standardized meeting agendas.

• Tactics
  ○ Start by assuming you’re not communicating or listening well, rather than blaming the other party.
  ○ Repeat what you’re hearing to make sure you’re getting it.
  ○ Worry about substance more than style.
    ▪ If you’re bothered by someone’s style of communication, box it as a separate issue.
  ○ If either party is too emotional to be logical, defer the conversation by hours or days.
  ○ If someone says “I feel like [X] is true,” ask them, “is it true? How do you know?” to ground them in reality.
  ○ Use the 2-minute rule for uninterrupted discussion of points.
  ○ Beware of assertive fast talkers - they assertively say things faster than can be comprehended to push back objections; especially effective against people worried about looking dumb.
    ▪ To neutralize, say “I’m sorry for being slow, but I need to slow you down to make sense of what you’re saying.”
  ○ End the conversation by stating the conclusions.
    ▪ If there isn’t agreement, say that.
    ▪ If there is further action, make a to-do list, assign people to do them by deadlines.
  ○ Get leverage in your communications by sharing.
  ○ Communication meant to educate should involve more people than that meant to arrive at the best answer.
    ▪ Not including them will undermine morale.

Radical Transparency Lets Everyone See Everything
• At Bridgewater, this means:
  ○ All meetings and interviews are recorded.
  ○ Talking behind someone’s back is being a “slimy weasel” and is fireable.
  ○ Dot collector makes assessments of each person visible in real time.
Baseball cards show each person’s strengths and weaknesses.

- This has benefits in:
  - Reducing politics since everything’s in the open.
  - Reducing bad behavior since it can be monitored.
    - Contrary to lawyers’ advice, recording meetings limited bad behavior and protected them when accused of something they didn’t do.
  - Prevents the syndrome of people doing two jobs - their actual job and the job of managing others’ impressions of how they’re doing their job.
  - Justice is more likely to prevail, instead of decisions being made behind closed doors by the powerful.
  - Creating training scenarios where employees can simulate responses in real situations.
  - Using the insights of all members to solve problems.

- Few exceptions for transparency:
  - When information is private or personal and doesn’t impact the community at large (eg health).
  - When info puts the long-term interests of the org or its clients at risk (eg trade details, IP, security, audits of departments).
  - When value is low but distraction risk is high (eg compensation).
  - People who lose their privilege no longer get transparency.
  - Don’t share information with the organization’s enemies.

- A flywheel effect exists with transparency
  - The more care you give each other, the tougher you can be on each other, the better you will perform, and the more rewards you get.

**Caveats**

- Dishonesty will happen
  - Decide per case on severity and circumstances. Get rid of habitual liars.
  - Leaks are fireable and “public hangings” need to happen.

- Adjustment time is needed
  - At Bridgewater, it can take 18 months to adjust.
  - People can get involved in more things than they should.
Believability-Weighted Decision Making

Once facts and viewpoints are put out there through radical truth, how do you reconcile them to make the best decisions?

To maintain order and allow the best decisions to surface, people must agree on procedures to resolve disagreements, and abide by the conclusions. At Bridgewater, the procedure they use is believability-weighted decision making.

- **Weigh the opinions of more believable decision makers more heavily than less capable ones.**
  - The most believable opinions come from those who 1) have repeatedly succeeded at the thing in question, 2) can logically explain their conclusions.
  - Baseball Cards and Dot Collector serve this.
- **If you are less believable:**
  - If you can’t successfully do something, it’s arrogant to tell others how it should be done.
    - Would you claim a better shooting technique than Steph Curry?
    - **Don’t hold opinions about things you don’t know anything about.**
  - In these cases, you are the student - spend more time asking questions to understand the logic.
  - You also should not expect equal treatment of your idea, for the teacher to try as hard to understand you as you do her. This can waste time.
  - Stress-test your ideas with other believable people, and your idea will become more believable.
- **Express the degree of conviction behind your beliefs - suggestion vs conviction.**
  - This will make clear how strongly people should weigh your opinion.
- **Listen to the reasoning moreso than the conclusion.**
  - “What data are you looking at? How do you draw your conclusions from the data?”
  - An inexperienced person may articulate clear reasoning and thus can be believable.
- **How to make decisions**
  - If the equal-weighted and believability-weighted votes align, the answer is easy and you move on.
  - If they disagree, generally go with the believability-weighted vote.
In some cases, the Responsible Party can override a believability-weighted vote, but at their own risk of being proven wrong by data, and counter to the spirit of the idea meritocracy.

- If you do this, you should be able to define what specifically you disagree with, understand the risks of being wrong, and explain your logic to others.

- Know when to stop debating. Get the big things right, and don’t worry about perfecting the small things.

  - But if you disagree on the importance of debating something, it probably should be debated.

- If the decision you wanted isn’t finally decided, you must support it.

  - Worry more about whether the system is fair than whether you get your way.
  - The group cohesion supersedes your individual desires.

How to Get Past Disagreements

Believability-weighted decision making is the system Dalio recommends to resolve disagreements. But some lingering resentment may still arise. Here’s how to deal with it:

- People must abide by the policies and procedures, just as though you had taken a dispute to court.

  - Two people can’t agree to ignore the principles, just like two people can’t agree to break the law.

- The right to debate is not the right to make decisions.

  - The decision-making authority alone has the responsibility to make decisions.

- Don’t let little disagreements divide you when big agreements should bind you.

  - Aka “narcissism of small differences”
  - Example: Protestants and Catholics should really be banded together because they follow Christ. Instead they quarrel over the small details.

- Don’t leave important conflicts unresolved - escalate or vote.

- See disagreements from top-down as “just another one of those,” and have procedures ready to resolve them (like Bridgewater’s Coach)

- Don’t let people threaten the system.

  - Don’t let people take it to an extreme, arguing about whatever and with whomever they please - or argue they have the right to threaten the meritocracy based on principles.
Be wary of people who suspend idea meritocracy for “the good of the organization.”

- If people have enough power to undermine a system and also prefer to get what they want more than maintain the system, the system will fail.
- Remember, the goal is to get at truth, not to prove someone is right or wrong.

People Management

In several useful tactical chapters, Ray Dalio lays out his principles for people management. I would extract the major themes as:

- People have different values, abilities, and skills. Values and abilities are very hard to change, so don’t hire people lacking these, and don’t rehabilitate people who lack them.
- Seek the truth on mistakes and shortcomings. Use good metrics and monitor them frequently.
- Impress to workers that accuracy of feedback and kindness are the same thing. The greatest gift you can give someone is the power to be successful.
- Make the hard decision to fire people in pursuit of the organization’s goals.

Cultivate Meaningful Relationships

- Great relationships are built on common values and interests, having similar approaches to pursuing them, being reasonable and considerate with each other, and holding each other to high standards.
  - Bridgewater is “a family business in which family members have to perform excellently or be cut.”
  - It’s important to have shared values and mission. People who aren’t aligned on the mission will work for different, conflicting goals (e.g. between making more money or upholding values).
- Treating people like partners or extended family will make relationships more special than quid pro quo.
  - People who buy into the community provide it with a long-term “skeletal strength of commitment.”
- The terms of the deal
  - At baseline, be considerate with each other. Generally, it’s more inconsiderate to prevent someone from exercising their rights because it offends you than for them to do it.
  - Strive to be on the far side of fair: each party should aim to say “you deserve more” to each other.
- Being generous does not necessitate fairness or entitlement.
  - Example - Bridgewater started a shuttle from NYC. Someone suggested that it’d be fair to compensate drivers who spend on gas.
- Warning: most people will pretend to operate in your interest while operating in their own.
  - Treasure honorable people who are capable and will treat you well even when you’re not looking.
- The stronger the community is, the more it protects against bad actors, thus becoming stronger.
- Tactics
  - Pay for half of activities people want to do together
  - Pay for food and drink for hosted dinners

**How to Hire Right**
- The penalties for hiring wrong are huge.
  - Years can pass, many dollars can be spent in training and retraining.
  - More insidious costs are loss of morale and diminishing standards.
- Design the machine first, then find the person.
  - Create a clear mental image of the values, abilities, and skills required for each person to do their job well. Then create a spec sheet.
    - Abilities are ways of thinking and behaving (eg fast learners; high level visionaries) and are unlikely to change much.
    - Skills are learned tools and can be acquired in finite time.
  - DON’T design jobs to fit people.
  - It’s a common mistake to focus on what should be done rather than who should be responsible for determining what should be done.
- Systematize the process.
  - Think through what questions are asked and how the different answers differentiate different candidates.
  - Save the answers to learn about how indicative they are of subsequent behaviors.
  - For intuitive judgments, capture data to measure the track records later.
  - Consider using personality assessments.
• Remember people pick people like themselves, so assemble interviewers who embody the qualities and abilities you’re hiring for (aka are believable).

• Look for extraordinary people.
  o Consider their background to see if they have demonstrated themselves to be extraordinary in some way.
  o If you’re not excited, don’t hire.
  o Dalio likes people who ask great questions.

• Warnings
  o Talk to believable references who can give you a clear picture of the path. People are prone to exaggerating accomplishments.
  o Success in school is a limited gauge of: memory and processing speed; determination to succeed; willingness to follow directions.
    ▪ It does not assess common sense, vision, creativity.
  o Beware impractical idealists who don’t execute practical plans that produce results.

• Tactics
  o Put a rookie next to a proven star and see how well she holds up.
  o Show candidates your warts. Put them in situations showing the most difficult aspects of your principles.
  o Compensate to provide both stability and opportunity.
    ▪ Make people earn their worth, not just accept it for security.
    ▪ Pay north of fair. Dalio thinks the best negotiations are those in which both parties argue that the other should take more.

• Whenever ready to make an offer, think one last time about what important things can go wrong and how you can raise your probability of being right.

How to Train, Evaluate, and Sort People

The main thing:

1. Remember the goal.
2. Give the goal to people who can achieve it or (worse) tell them what to do.
3. Hold them accountable.
4. If they fail, train them and give them time.

5. If they can’t do the job after this, switch them to a different job that matches their strengths, or get rid of them.

- It takes 6-12 months to know an employee generally.
  - This should be an iterative process with new assignments tailored to them.
  - Best to have at least 2 believable trainers triangulate their view on a trainee.
- Make sure incentives align with responsibilities, and they experience the consequences of the outcomes.
- Resist micromanagement.
  - Don’t tell people what they should do - it reflects inability.
  - Train and test, and explore how they are doing and why.
- The ultimate Responsible Party is the person who bears the consequences of failure.
  - It’s your responsibility to pick the right doctor, since you bear the responsibility if she does a bad job.

**Evaluation**

- Make a clear “contract” on what the expectation of work is.
  - Without this, you can’t hold people accountable for it not being fulfilled.
  - Review goals, tasks, and responsibilities at least once a quarter.
- Evaluate employees with the same rigor as you do job candidates.
  - Don’t be easy on people just because they’re not outsiders.
- Hold people to the same standards, and provide feedback consistent with the standards.
  - Don’t spread the blame.
  - Don’t hold the stronger performer to a higher standard.
- Make your metrics clear-cut and impartial.
  - Even better, tie the metrics formulaically to predetermined consequences (like bonuses).
  - Define the most critical metrics, and have discipline in checking them.
- Be precise about attributing specific results to specific people’s actions.
  - Everyone thinks what they’re doing is more important than it really is.
Tally up everyone’s belief of their % contribution to the org, and you’ll end up with well over 100% (Bridgewater was 300%).

- Don’t be overconfident about your assessments.
  - Triangulate with other believable people.
  - Get in sync with the person you’re giving feedback to.

- Take data points over time to notice patterns.

- Judge people based on both reasoning and outcomes.
  - Since often outcomes are out of their control.
  - “Pay more attention to the swing than the shot.”

- Figure out if failures are due to design problems (eg too many responsibilities), inabilities, or inadequate training.
  - Don’t confuse lack of skills for lack of abilities. You will risk wasting time training them.

- Check behavior and deter bad behavior.
  - More people than you think will cheat if given the opportunity.
  - Investigate and explain to people so there are no surprises. This shouldn’t be taken personally, just as bank tellers shouldn’t decry banks counting money in drawers.
  - Auditors’ procedures should not be known to those being audited.
  - Find ways to audit the auditors to avoid rubber stamping.
  - Use “public hangings” to deter rule violations.

**Delivering feedback**

- Reflect what is succeeding and not in proportion to the actual situation.
  - Don’t try to balance compliments and criticisms for its own sake. Instead of celebrating how great we are, focus on where we need to improve, since that’s how we got to be great.
  - Clarify whether the weakness or mistake is indicative of a trainee’s total evaluation.
    - From a superior position, one errant comment could make someone afraid of being fired.

- **Accuracy and kindness are the same thing.**
  - The greatest gift you can give (and receive) is the power to be successful.
  - A management relationship should feel like skiing together - doing things by trial and error, encouraging good back-and-forths.
Exhort people to focus on whether the feedback is true, rather than the implications of that feedback.

- As a manager, you can say “does this sound accurate to you?”

- Then learn about them and have frank conversations about root causes.
- Remind them about pain and the need for reflection and truth-finding.
- Let them see their failures so clearly they are motivated to change them.

**Decision points**

- Keeping people in jobs they’re not suited for is toxic system-wide.
  - It compromises meritocracy.
  - It holds back the person’s personal evolution.

- **Train, guardrail, or remove people. Don’t rehabilitate them.**
  - Rehabilitation involves changing people’s values or abilities.
  - People don’t change that much. Best to assume their values and abilities won’t change, unless there is good evidence to the contrary.

- Resist the urge to find what else that person can do.
  - Ask why someone failed, and why that failure won’t happen in the new role.
  - The person may resent being back in a job they probably can’t advance beyond.

- Great people are rare. Think about how to keep them.
  - Encourage them to speak up about how things are going.

**Your Organization Machine**

**Consider Your Organization as a Machine**

- A great manager is essentially an organizational engineer.
  - They work hard to maintain and improve their machines.
  - They worry about what can go wrong. Thus they study how well the machine is doing with metrics.
  - They can anticipate the results from different inputs of people. They also anticipate that people are imperfect, so they design good results even with mistakes.
A master manager doesn’t have to do practically anything. Having to micromanage is a bad sign of improper machine design.

- A flaw in the machine’s output is a flaw in its design or in the people.
- Like a foreman, understand your tools.
  - How people’s values, abilities, and skills differ, and how they should be paired with goals.
  - Also understand the processes and problems around you to make well-informed decisions.
    - **[Be able to do the job 2 levels below you.]**
- Every case should be viewed as training and testing your machine.
  - Discuss a problem at both machine level (why that outcome was produced) and case-at-hand level (what to do about it).
    - Doing just the second is micromanaging.
  - If you merely replace a broken part, it’ll break again. Keep looking up levels to redesign the machine if needed.

**Organization Structure**

- Imagine the best organization and then choose the right people for it.
  - Don’t take the people and then fit an organization to them.
- Build the org around goals rather than tasks.
  - Marketing and Client Services should be different departments, even though their tasks overlap. If merged, their goals would conflict (one is to make sales and another is to take care of clients).
- Build from the top down by hiring managers first, who can help build the machine.
- Different people are good at different parts of the 5-Step Process. Build a team that complements within.
- Make departments self-sufficient so they don’t have to requisition resources through bureaucracy.
- Have straight single reporting lines that don’t cross.
  - Dual reporting across departments causes confusion, except for co-heads of the same department.
  - Don’t grab people from other departments unless you speak to the manager.
- Limit direct report ratio from 1:5 to 1:10.
- Deal with key man risk
- Build a perpetual motion machine that can work well without you.
- Every key person should have at least one person who can replace her, just as you have backup parts for machines.
- **Expose the next generation of leaders to the thinking and decision making of current leaders.**
- Have successors do your job for a while to get vetted.
- Conversely, no one can be so important that they are irreplaceable.
- Create great decision-making machines by thinking through the criteria you use to make decisions, before and while you make them.
- **Add guard-rails when needed.**
  - Only to help good people perform better, not to help failing people reach the bar.
  - A good guardrail can be a team member whose strengths compensate for the weaknesses.
  - Don’t count on people to save themselves or design their own best solution.
- **Add governance and checks and balances.**
  - Governance is the oversight system that removes people and processes if they are failing.
    - Even benevolent leaders tend to get more autocratic since they have limited time to make difficult choices, and they lose patience with arguments and issue commands instead.
  - Beware of fiefdoms, where personal loyalty can conflict with organization loyalty.
  - The company should have a board that determines if the people running the company are capable. The board can select CEOs but does not micromanage the firm.
    - The board lines must be independent of the reporting lines of the CEO.
    - Board must have the courage to hold people accountable.
- Dalio believes a single CEO is not as good as a great group of leaders.
  - Thus Bridgewater has co-CEOs and three CIOs.

**The 5-Step Process, Applied to Organizations**

Just like individuals, organizations employ the 5-Step Process to evolve and continuously improve. Since an organization deals with far more people, it can be even more complicated to step through the entire 5 steps.
Set Clear Goals

- **Make a clear “contract” on what the expectation of work is.**
  - Without this, you can’t hold people accountable for it not being fulfilled.
  - **Review goals, tasks, and responsibilities at least once a quarter.**
- Be clear on how your lower-level goals achieve your higher-level goals and align with your values.
- Choose great metrics.
  - **Imagine the most important questions you need answered to know how things are going.**
  - You should almost be able to manage via metrics alone.
- Explain the principles behind your rules.
  - So people don’t just pay lip service to the rules. Their ethics should make them abide by the rules.
- Probe deep and hard.
  - Probe to the level 2 levels below you. Have them feel free to escalate problems to you.
  - Make the probing transparent to increase the probability of being right (to let others evaluate) and reinforce faith in due process.
  - Pull all suspicious threads.
    - Small problems can be symptomatic of serious underlying problems.
    - Reinforce the culture of excellence.
    - Imagine your little problems are pieces of trash you’re stepping over to get across the room. They may not be critical, but it doesn’t hurt to pick up the trash, and it reinforces a culture of excellence.
  - Dalio asks reports to write a 10-15 minute report on what they did that day, issues, and reflections.

Identify Problems and Don’t Tolerate Them

- It must be OK to make mistakes, but unacceptable not to identify them or learn from them.
  - People need to internalize the Life Principles around embracing reality. People need to embrace their pain as a growth opportunity, and reflect on what they have to improve.
  - **Celebrate** finding mistakes since they’re opportunities to improve the machine.
  - Don’t fire someone for making an honest mistake - this incentivizes hiding mistakes.
  - Do fire someone for hiding a mistake.
People must escalate responsibilities they cannot handle.

- Assign people the job of perceiving problems.
  - They should have independent reporting lines to convey problems.
  - Have as many eyes looking for problems as possible.

- Beware of:
  - Boiling water syndrome - people get used to things that would shock them if they saw them with fresh eyes.
  - Group think - don’t assume that just because other people aren’t screaming means there’s not a problem. Other people are thinking the same thing.

- Keep an error log to track mistakes and solutions.
  - Observe patterns of mistakes to see if they are signals of actual weaknesses.

- Be very specific about problems.
  - Don’t generalize. Don’t use “we” and “they.”
  - Name specific people and specific instances. Someone created the procedure that went wrong or made the faulty decision.

Diagnose Problems to Find Root Causes

- A common mistake is to deal with problems as one-offs rather than diagnosing problems with the machine.
  - Get to the level of what it is about people that led to bad outcomes.
  - Root causes are described in adjectives, not verbs. “Careless,” “not well trained,” “has low bandwidth” vs “forgot to write reminder.”

- Questions to ask checklist
  - Is the outcome good or bad?
  - Who is responsible for the outcome?
  - Is the RP incapable, and/or is the design bad?
  - How should the machine have worked?
    - Stay at the level of who should be doing what, rather than procedural details.
  - If the machine didn’t work, what broke?
    - Trace through the previous answer to find what broke. This is the proximate cause.
Why didn’t things go as they should have?

- Ask Five Why’s.
- Pinpoint a specific key attribute (eg not executing well, not perceiving problems well)
- If X attribute is done well next time, will the bad outcome still occur?
  - AKA if we fixed this part, would that repair the problem?
  - If the problem is a faulty design, ask who was responsible and whether they’re capable of designing well.

Is the root cause a pattern?

- From “Tom was careless” to “Tom is often careless.”
- If so, is this due to training or inability?

How should the people/machines evolve as a result?

- Who should do what differently?
  - Do responsibilities need to be clarified?
  - Do machine designs need to be reworked?
  - Do people’s fit need to be reevaluated?

Stay calm and rational.

- Avoid Monday morning quarterbacking - don’t evaluate a decision knowing what you know now.
- Understand the context the person was in. Was this decision a quality person would have made?

Common manager root causes

- They are too distant.
- They have problems perceiving bad quality.
- They have gotten accustomed to how bad things are.
- They can’t admit they are unable to solve their own problems.
- They fear adverse consequences from admitting failure.

Go back before going forward.

- Reflect on how the machine was working up until now. Tell the story of how we got here.
Design Improvements to Your Machine

- Take the time to come up with a good game plan.
  - The team will spend much more time doing.

- Visualize the plan.
  - Picture, like a movie script, who will do what when and the result.
  - Put yourself in the workflow to understand what you’re dealing with.

- Visualize alternative machines and outcomes.
  - If something is hard or frustrating, triangulate with others. Don’t settle on the first obvious solution.

- Consider second- and third-order consequences.
- Consider that the problem might be happening at other departments.
- Make changes to the Organization Structure if needed.

Do the Tasks Required to Completion

- Most of success comes from doing the mundane stuff.

- Visualize the success and crave the feeling of achievement to push through the failure.

- Expect things to take 1.5x as long and cost 1.5x as much.

- Use checklists.

- Develop good habits through tools and protocols.
  - Experiential learning is more powerful.
  - Automate decision making if possible.

- Celebrate reaching goals and solving problems.

- [Dalio doesn’t give much strategic advice on how to improve a problem, partly because it’s too case-specific, possibly partly because visualizing solutions is his strong point and he doesn’t struggle with it.]

Misc Points About Work

- Don’t let yourself get squeezed.
  - Ignore threats about quitting, bringing a lawsuit, embarrassing in press.
  - Once you give in, it changes the rules of the game and opens you up to more of the same.

- Great leadership is seeking the best answers, being challenged often and appealing to reason.
• Manipulating emotions can cause people to refuse after reflecting clearly.
• Don’t worry about whether your people like you.
• It’s not illogical to believe you know better than the average person, as long as you stay open-minded.
  • If you don’t have better insights, you shouldn’t be a leader.
• For critical tasks, use “double-do” rather than “double-check.”
  • Have two people do the same task to get two independent answers.
  • Remember a double-check can only be done by someone who can do the work herself.

Bridgewater’s Tools
• Principles
• Recording all meetings
• Coach
  • Library of common situations (e.g., disagreed with assessment) linked to relevant principles
• Dot collector
• Baseball cards
• Issue log
  • Record mistakes with severity of issue and who responsible.
  • Good for patterns of problems
• Pain button
  • Prompts recording what the pain was like, then later guided reflection
• Dispute resolver
  • Provides paths for resolving disagreements in idea-meritocratic way
• Daily update tool
  • Each report takes 10-15 minutes for email of what they did that day, issues, and reflections
• Contract tool
  • Monitor commitments to each other, such as deliverables and deadlines
• Process flow diagram
  • Visualize the organization as a machine
Miscellaneous Points

Misc Principles

- It’s important not to get knocked out of the game. So don’t fail too big and minimize your losses.
  - Dalio has seen a few people bet so big they ruin themselves - Bunker Hunt who tried to corner the world silver market; Alan Bond who bet that the US dollar wouldn’t rise against Australian dollars and didn’t hedge.

- **Diversify by compiling uncorrelated bets**
  - Having a few good uncorrelated return streams is better than just having one.

- Having uncorrelated bets increases return-to-risk ratio and protects you from unacceptable downside.

- Traders and entrepreneurs need to correctly bet against the consensus. This also means being wrong more often than usual.

- **Virtuous cycles**
  - Make audacious goals -> fail -> learn principles -> improve chances of success -> meet goals -> make audacious goals

- People expect the future to be a slightly modified version of the present, but it is usually very different.
  - Most people are more emotional than logical, thus overreacting to short-term results based on how they feel (like selling low and buying high).

- **Herd behavior**
  - When everyone thinks the same thing (that something is a sure bet) it’s already reflected on the price, and betting on it is probably going to be a mistake.

- When people are very pessimistic, they sell out, and prices get very cheap

- Meditation creates an equanimity that allows clearer and more creative thinking.

- When what you expect isn’t matching up with what’s happening, it’s unclear if you have a great opportunity or a huge mistake.

Misc Anecdotes

- Dalio started Daily Observations to communicate advice scalably to clients; so others could understand his logic and improve it; to force himself to research and reflect daily.

- Reject good alternatives to pursue even better ones.
In the 90s Bridgewater set up a China investment branch but was stretched thin, so after a year they closed shop.

Dalio didn’t built investment products just because they’d sell well, if they weren’t interesting to him or didn’t align with his values.

- He had both McDonald’s and Lane Processing (poultry) as clients. McDonald’s worried that chicken prices might squeeze their margins on the McNugget. Chicken producers didn’t want to quote a fixed price because they were worried about being squeezed themselves by rising costs.
  - Dalio showed Lane how to use corn and soybean futures to lock in costs so they could quote a fixed price. Feeling safer, McDonald’s released the McNugget.

- Dalio combined family and work when he could, like taking kids on business trips and having the Bridgewater office on the same property his family lived.

- Dalio considered how to invest his wealth into a trust for the long term. Considering that there were only two big forces to worry about - growth and inflation - he created an “All Weather Portfolio” that would do well in all 4 quadrants (rising growth and rising inflation, etc). This is now called “risk parity” investing.

- Dalio wants his descendants to struggle well and become strong, so he’s not leaving all his money to them.

### Warning Signs to Watch For

- People who issue low-confidence statements and insist they’re implicit questions, but are actually passive-aggressive closed-mindedness.
  - “I could be wrong, but here’s my opinion”

- “I feel like X is true” or “I think that” - a sign that the person may not be thinking in terms of facts.

- When someone points out exceptions and edge cases, rather than weighing all the pros and cons and focusing on by and large whether something true.
  - This signals people who can’t weigh expected values and probabilities. They may be poor decision makers.

- Ask “how is goal X going?” If they reply by listing tasks instead of offering a synthesis, then they tend to confuse goals and tasks, and can’t be trusted with responsibilities.

- Use sympathetic responses (tightening of chest, higher blood pressure, heart rate) as a trigger to understand your emotional you is taking over

- Assertive fast talkers - they assertively say things faster than they can be comprehended to push back objections; especially effective against people worried about looking dumb.
  - Slow them down, apologizing for being slow if you have to.

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• Someone who says “we” to depersonalize a mistake.

• “We should do X” - this is a fuzzy solution to a problem that won’t get done, unless specific people or deadlines are assigned.